northwest Clean Air agency

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Air Operating Permit
Excess Emissions Report
Form Part II

Name of Facility	Shell, Puget Sound Refinery	Reported by	Tim Figgie
Date of notification	April 18, 2013	Incident type: breakdown/ upset/startup or shutdown	breakdown
Start Date	April 18, 2013	Start Time:	11:00 AM
End Date	April 18, 2013	End Time:	4:00 PM
Process unit or system(s): Flare			

Incident Description

On April 18 at approximately 11am the H2S readings in the flare gas began to increase. The flare seal pots showed no pressure spikes that would cause breakthrough so Operations personnel immediately began to troubleshoot the problem by checking for high sulfur sources into the sweet flare line. When Operations blocked-in liquid mover 21NG71, which drains liquids from the fuel gas mix drum line, the flare H2S readings dropped indicating a leaking check valve. This event resulted in H2S readings above the 3-hour rolling average limit.

Immediate steps taken to limit the duration and/or quantity of excess emissions:

Operations immediately began troubleshooting the problem.

Applicable air operating permit term(s): none assigned

Estimated Excess Emissions:	Pollutant(s):	Pounds (Estimate):
Based on CEMS and calculated stack flow	SO2	7

The incident was the result of the following (check all that apply):

- ☐ Scheduled equipment startup
- ☐ Scheduled equipment shutdown
- ☐ Poor or inadequate design
- ☐ Careless, poor, or inadequate operation
- ☐ Poor or inadequate maintenance
- ☐ A reasonably preventable condition

Did the facility receive any complaints from the public?

- ☒ No
- ☐ Yes (provide details below)

Did the incident result in the violation of an ambient air quality standard

- ☒ No
- ☐ Yes (provide details below)

Root and other contributing causes of incident:

The root cause of this event was a faulty check valve.

The root cause of the incident was:
(The retention of records of all required monitoring data and support information shall be kept for a period of five years from the date of the report as per the WAC regulation (173-401-615))

☒ Identified for the first time

The root cause of this event was a faulty fuel gas supply valve switch. Identified as a recurrence (explain previous incident(s) below – provide dates)

The root cause of this event was a faulty check valve.

Are the emissions from the incident exempted by the NSPS or NESHAP "malfunction" definitions below?

☐ No

☒ Yes (describe below)

The root cause of this event was a faulty check valve.

Definition of NSPS "Malfunction": Any sudden, infrequent, and not reasonably preventable failure of air pollution control equipment, process equipment, or failure of a process to operate in a normal or usual manner. Failures that are caused in part by poor maintenance or careless operation are not malfunctions. 40 CFR 60.2

Definition of NESHAP "Malfunction": Any sudden, infrequent, and not reasonably preventable failure of air pollution control and monitoring equipment, process equipment, or a process to operate in a normal or usual manner which causes, or has the potential to cause, the emission limitations in an applicable standard to be exceeded. Failures that are caused in part by poor maintenance or careless operation are not malfunctions. 40 CFR 63.2

Analyses of measures available to reduce likelihood of recurrence (evaluate possible design, operational, and maintenance changes; discuss alternatives, probable effectiveness, and cost; determine if an outside consultant should be retained to assist with analyses):

The faulty check valve was blocked in and will not be put back in service until Operations verifies for proper function.

Description of corrective action to be taken (include commencement and completion dates):

See above

If correction not required, explain basis for conclusion:

See above

Attach Reports, Reference Documents, and Other Backup Material as Necessary. This report satisfies the requirements of both NWCAA regulation 340, 341, 342 and the WAC regulation (173-400-107).

Is the investigation continuing? ☒No ☐Yes

Is the source requesting additional time for completion of the report? ☒No ☐Yes

Based upon information and belief formed after reasonable inquiry, I certify that the statements and information in this document and all referenced documents and attachments are true, accurate and complete.

Prepared By: _ Tim Figgie/James Stellar__ Date: April 25, 2013

Responsible Official or Designee: Tom Rizzo Date: April 28, 2013

on behalf of Tom Rizzo (GM-PSR)